



March 30, 2023

Alberta Energy Regulator  
Emissions Management  
Suite 1000, 250 5<sup>th</sup> Street SW,  
Calgary, Alberta,  
T2P 0R4

Sent via email: Lindsay.campbell@aer.ca

Attention: Lindsay Campbell

Dear Ms. Campbell,

**RE: Alt-FEMP Interim Performance Report - Everdell Gas Plant (14-20-038-07W5)**

Whitecap Resources Inc. (WCAP) received approval of its two-year Alt-FEMP pilot at the Everdell Gas Plant on March 3, 2022. The approved program includes the implementation of Kuva image based fixed gas detection sensors and optical gas imaging (OGI) follow-up.

**Screening and Survey Details**

- Three (3) Kuva Gas Cloud Imaging cameras providing continuous daytime monitoring of methane emissions throughout 2022; and
- One (1) OGI survey on October 19, 2022.

*Analysis of trends observed for fugitive leaks*

- Data collected from the Kuva system and the OGI survey demonstrate a significant reduction in fugitive emissions in 2022. This previous two years (2020 and 2021) of triannual surveys identified numerous leaks, requiring subsequent repairs. The multi-year data demonstrates the effectiveness of the fugitive emissions management program in reducing the prevalence of leaks.

*Total number of follow-up potential emissions found*

- There were no detections of potential emission sources requiring follow-up in 2022. There were 1020 detections of potential emissions: all were reviewed and found to be routine vent emissions from the water tanks, compressor vents or slug catchers. No follow-up OGI investigations were undertaken.

*Actual annual emission reductions and comparison to estimated or modelled emission reduction*

- The OGI survey completed in October revealed that the gas plant had near-zero fugitive emissions in 2022. All fugitive emissions were below the detection limit of the Kuva cameras and were not identified during the continuous screening of the facility.

*Analysis of discrepancies between estimated/model results and actual results including any new model results incorporating duty holder specific emission profile.*

- No discrepancies were found.

### **Technology Limitation**

*Provide information on the performance of the technology during the pilot or full-scale approval while deployed in the field. Include details on weather effects, measurement, detection limit, and any other performance indicator.*

- All leaks recorded in the October OGI survey were below the detection limit of the Kuva system.

### **Success of the Alt-FEMP**

*Detail the success of the alt-FEMP in meeting the objectives of the application.*

- The data collected in 2022, as part of the alt-FEMP pilot, demonstrates the effectiveness of screening for larger leaks. OGI cameras are very sensitive, able to detect extremely low-rate and low-volume gas leaks in the hands of trained and experienced technicians. Our data shows the alternative technology was effective in screening out very small leaks that would incur very high abatement costs to eliminate.

### **Nonperforming Program Elements**

*Identify any alt-FEMP program elements that did not meet expectations.*

- Not applicable

*Provide details of any changes made to the technology or work practices during the alt-FEMP program in response to nonperforming elements or to optimize the program.*

- Not applicable

### **Additional Control Measures**

*Summarize any additional control measures or plans added to the program or required by the approval.*

- Not applicable



### **Key Performance Indicators**

*Provide a summary of the key performance indicators included in the application and not reported in any other section.*

- Not applicable

### **Additional Information**

*Summarize any other performance analysis completed to assess the success of the alt-FEMP.*

- Not applicable

This above information and attached excel file are intended to satisfy the reporting requirements outlined in the May 2022, *Alt-FEMP Performance Report Requirements*. If you have any questions regarding the Alt-FEMP Pilot or this performance report, please contact me at 403-270-4746 or [linda.varty@wcap.ca](mailto:linda.varty@wcap.ca).

Regards,

A handwritten signature in blue ink, appearing to read "Linda Varty", with a long horizontal line extending to the right.

Linda Varty, P. Tech. (Eng.)  
Senior Environmental Regulatory Specialist